

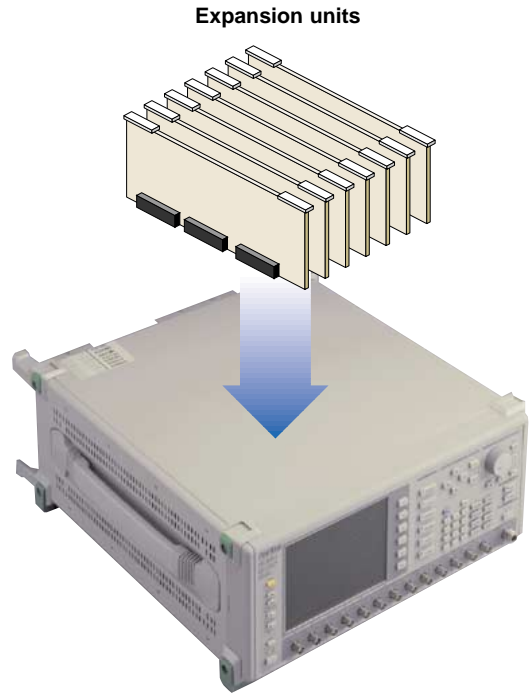
The 3GPP and 3GPP2 recommended dynamic range test for W-CDMA and CDMA2000 receivers requires AWGN (Additive White Gaussian Noise) to be mixed on the wanted modulated signal. When the MU368060A AWGN Unit is installed in the MG3681A Digital Modulation Signal Generator, AWGN can be generated at real time.

When both the MU368040A CDMA Modulation Unit that installed MX368041B W-CDMA Software is mounted, one MG3681A can be utilized as a wanted signal source (W-CDMA modulating), an interfering signal source (W-CDMA modulating, CW) and an AWGN source.

Furthermore, since mixed Uplink W-CDMA signal and AWGN internally can be outputted by setting the C/N in MX368041B, the base station receiver dynamic range test is realizable by one MG3681A.

When both the MU368030A Universal Modulation Unit that installed MX368033A CDMA2000 1xEV-DO Signal Generation Software or MX368031A Device Test Signal Generation Software is mounted, one MG3681A can be utilized as a wanted signal source (CDMA2000 modulating), an interfering signal source (CDMA2000 modulating, CW) and an AWGN source.

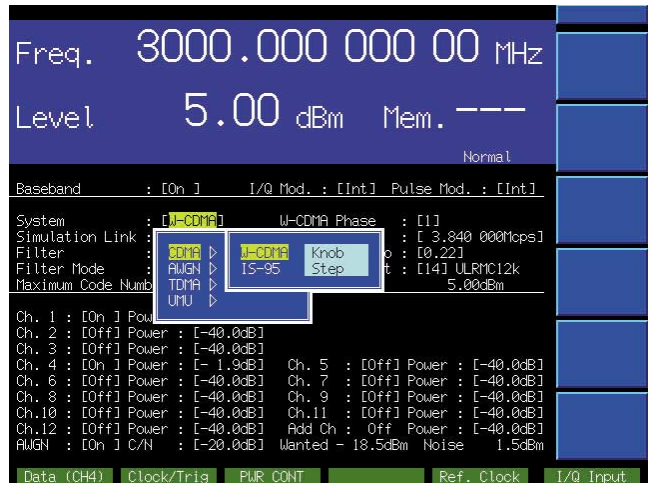
Furthermore, when both MU368040A CDMA Modulation unit are also mounted, since mixed CDMA2000 signal and AWGN internally can be outputted by setting the C/N in MX368033A or MX368031A, the base station receiver dynamic range test is realizable by one MG3681A.



• Configuration of Communication System Software and Expansion Unit

Communication system	Applicable software	Expansion unit
W-CDMA (3GPP) CDMA2000	—	<p>MU368060A AWGN Unit</p>

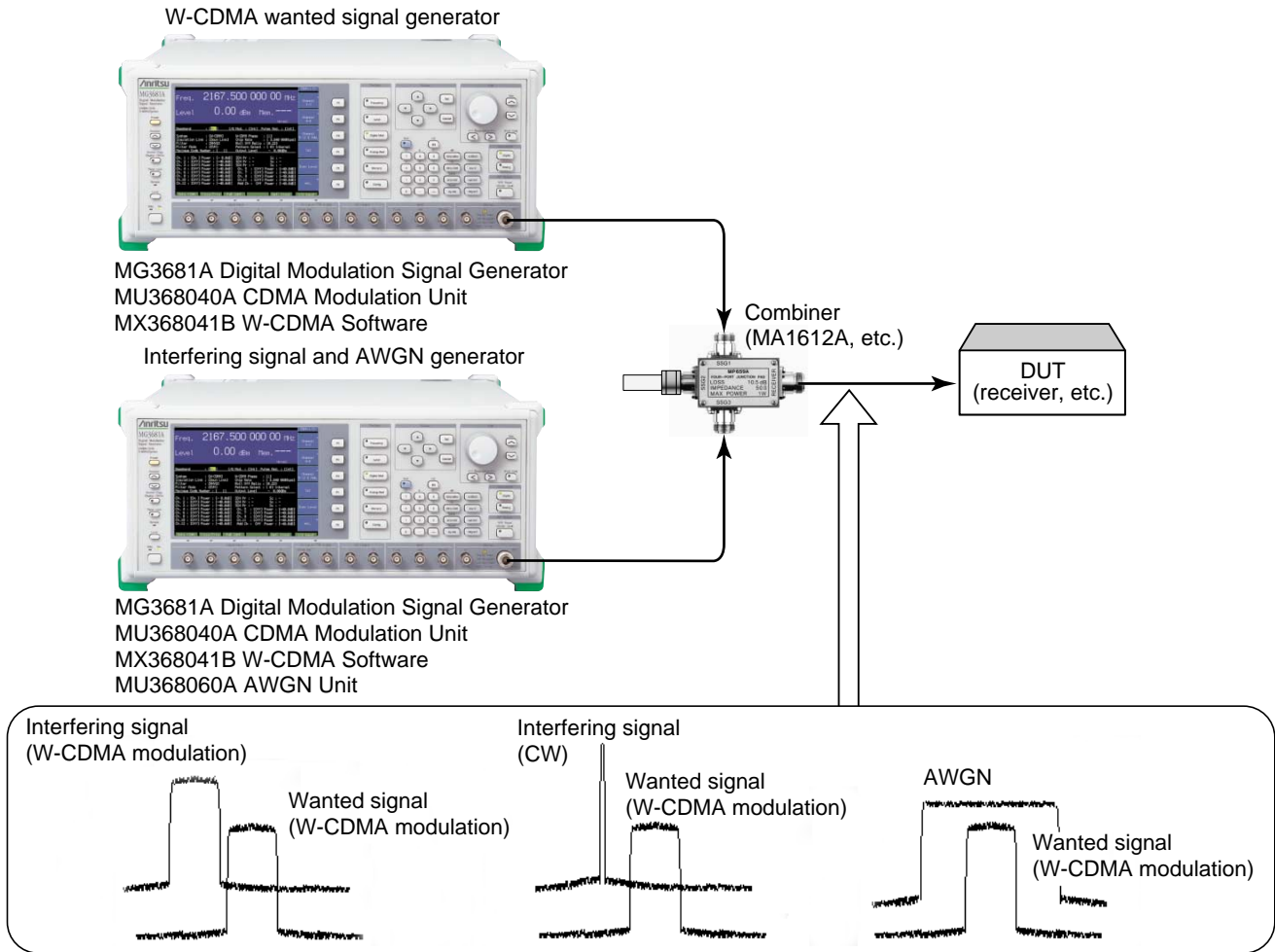
The expansion unit is installed in the MG3681A Digital Modulation Signal Generator mainframe.



Application Examples

• 3GPP Recommended Dynamic Range and Interference Tests

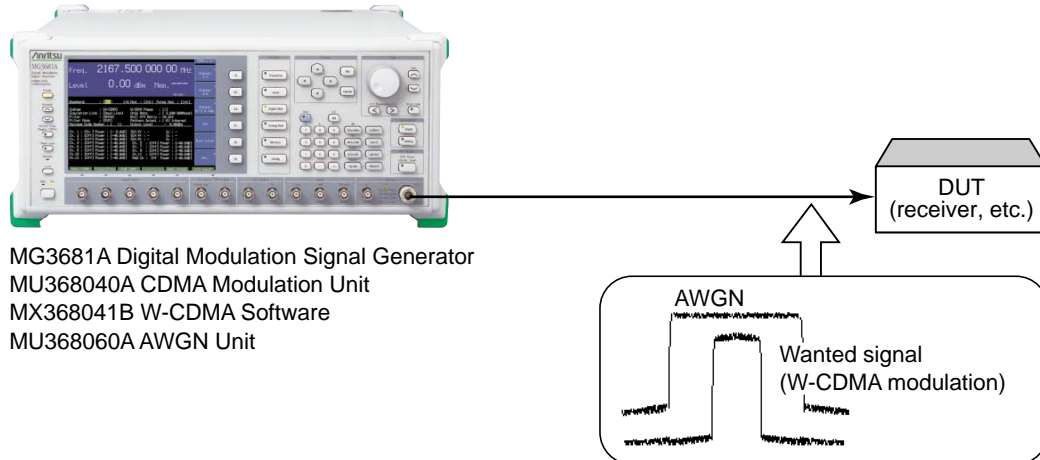
This test does not require a separate signal generator for both interfering signal and AWGN.



• Dynamic Range Test by mixed Uplink W-CDMA signal and AWGN internally

Since AWGN is mixed digitally, the C/N ratio accuracy and stability are excellent.

Signal generator for wanted signal and AWGN



Specifications

Frequency range	100 to 3000 MHz
RF output	Level range: -143 to -3 dBm (total power at W-CDMA and AWGN internal addition*1) Level accuracy: Within ± 3.0 dB compared with CW output level. *1920 to 2170 MHz, noise bandwidth: 7.68 MHz, -3 dBm, ALC on, continuous mode: off
Noise	Probability distribution: Gaussian distribution Crest factor: ≥ 14 dB (1920 to 2170 MHz, -3 dBm, ALC on, continuous mode: off) Bandwidth: 1.5 to 16 MHz *2 Calculated bandwidth: 10% to 80% of noise bandwidth setting In-band power calculation accuracy (Accuracy of in-band calculated power ratio to total power of RF output) : * 18° to 35°C ± 0.6 dB (noise bandwidth setting: 1.5 to 4 MHz, typical) ± 0.6 dB (1920 to 2170 MHz, noise bandwidth setting: 4 to 8 MHz) ± 2.0 dB (1920 to 2170 MHz, noise bandwidth setting: 8 to 16 MHz) C/N setting range*1: -30.0 to -20.0 dB (resolution: 0.2 dB), -19.9 to -8.0 dB (resolution: 0.1 dB)

*1: AWGN internal addition function can be used only at uplink when the MU368040A and MX368041B are both installed in the MG3681A.

*2: Set a chip rate of x 1.5 or x 2 at AWGN internal addition

Ordering Information

Please specify the model/order number, name, and quantity when ordering.

Model/Order No.	Name
MG3681A *1	Main frame Digital Modulation Signal Generator (250 kHz to 3000 MHz)
MU368060A	Expansion unit AWGN Unit
W1955AE	Standard accessory MU368060A operation manual: 1 copy
MU368060A-90 MU368060A-91	Maintenance service Extended three year warranty service Extended five year warranty service

Model/Order No.	Name
MU368030A *1 MU368040A *1	Expansion unit Universal modulation Unit CDMA Modulation Unit
MX368031A *1 MX368033A *1 MX368041B *1	Software Device Test Signal Generation Software (for MU368030A) CDMA2000 1xEV-DO Signal Generation Software (for MU368030A) W-CDMA Software (for MU368040A)

*1: For details of the MG3681A, MU368030A, MU368040A, MX368031A, MX368033A and MX368041B, refer to the relevant catalogs



Specifications are subject to change without notice.

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